

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-16 are all the claims pending in the application. Applicant submits the claims define patentable subject matter.

Preliminary Matters

As an initial matter, Applicant notes the Examiner has not acknowledged acceptance of the drawings filed with application on December 16, 2003. Therefore, Applicant respectfully requests the Examiner make such acknowledgement in the next official action.

Claim Rejections - 35 U.S.C. § 103

Claims 1-7, 10-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruki et al. (USP 6,337,862 B1; hereinafter "Naruki") and Elenich et al. (USP 6,904,783 B2; hereinafter "Elenich") and Lebizay et al. (USP 6,144,658; hereinafter "Lebizay"). Applicant respectfully traverses this rejection.

Independent claim 1 is directed to an apparatus for controlling an input signal level recognized when an input signal is inputted to a device. Independent claim 1 recites, in part:

a memory storing values including a current input signal level to be controlled, a previous input signal level which is a level of an input signal preceding a current input signal, a maximum change value which is an upper limit of an allowable range of level variation in the device, a maximum no-change value which is an upper limit of an allowable range of level in variation in the device, a change counter value which is a number of input signals having different levels detected by comparing the current input signal level with the previous input signal level, and a no-change counter value which is a number of input signals having a same level detected by comparing the current input signal level with the previous input signal level;

a determining unit determining whether corresponding values stored in said memory are substantially identical, based either on the maximum change value and the change counter value, or on the maximum no-change value and the no-change counter value, and outputting a determination; and

a control unit reading the values stored in said memory to output the values to said determining unit and storing a predetermined level as the current input signal level based on the determination by said determining unit as to whether said corresponding values are substantially identical.

By contrast, Naruki discloses a method for processing an audio signal which reproduces a desired sound quality of an audio signal, reduces data volume and processes the signal with a test tone so that the audio signal is reproduced at an output level adjusted according to the test tone.¹ Naruki uses a memory 44 to temporarily store a series of user data, a series of band limited audio data, a series of sampling frequency reduced data, a series of thinned-out audio data and a series of differential audio data produced in the signal processing circuit 43² However, none of the values stored correspond to the claimed previous input signal level which is a level of an input signal preceding a current input signal.

Nonetheless, the Examiner asserts that Naruki teaches this feature of the claimed invention. In support of his position, the Examiner cites FIGS. 14, 15 and 18, and states that the “data with respect to time are controlled and further as time defined as previous and current signals.” Applicant respectfully disagrees with the Examiner’s position.

Instead, Applicant submits the cited data series merely refer to the user data noted above. That is, the series (Xc1, ... Xci) represents band limited audio data (i.e., thinned out data

¹ See Naruki, col. 2, line 39 to col. 3, line 10.

² See Naruki, FIG. 13, and col. 15, lines 38-42.

resulting from a reduced sampling frequency),³ and the series {X_{bi}, X_{2i-1}, X_{ai}, X_{2i}} represents the series of PCM audio data reproduced in an interpolation processing circuit of the signal processing circuit.⁴ Thus, none of the signals cited by the Examiner correspond to the claimed previous input signal level which is a level of an input signal preceding a current input signal, which is stored in the claimed memory. Further, none of the signals stored in the memory 44 (noted above) correspond to claimed previous input signal level.

Consequently, Applicant submits Naruki fails to teach or suggest these unique features, and further, none of the other cited references, either alone or in combination, teach or suggest these features of the claimed invention.

The Examiner goes on to concede that Naruki fails to disclose both a maximum change value, which is an upper limit of an allowable range of level variation in the device, and a maximum no-change value, which is an upper limit of an allowable range of level in variation in the device. The Examiner also concedes that Naruki fails to disclose a change counter value which is a number of input signals having different levels detected by comparing the current input signal level with the previous input signal level, and a no-change counter value which is a number of input signals having a same level detected by comparing the current input signal level with the previous input signal level.

However, the Examiner asserts that Elenich teaches all of the above-noted features. Again, Applicant respectfully disagrees with the Examiner's position. Specifically, the Examiner states that Elenich discloses:

³ See e.g., Naruki, FIG. 14A and col. 19, lines 9-14.

⁴ See e.g., Naruki, FIG. 14A and col. 19, lines 6-8.

a system for detecting tank level in which he disclose[s] of the [sic] memory with the same technique for storing valued [sic] including the distinction between the two maximum change value of counters with threshold limit and different one from the other [sic] ..., and further similarly twp distinct counters of a change counter value, and a no-change counter value which is a number of input signals levels ... for purposes of monitoring/calculating the estimated level sensor value and comparing the estimated value with [the] actual value.

Applicant respectfully disagrees.

First, Applicant points out that the Examiner has not cited a portion of Elenich which discloses the particular features of the claim, i.e., a change counter value which is a number of input signals having different levels detected by comparing the current input signal level with the previous input signal level, and a no-change counter value which is a number of input signals having a same level detected by comparing the current input signal level with the previous input signal level.

Instead, the Examiner merely makes a conclusory assertion that Elenich discloses the claimed features “for purposes of monitoring/calculating the estimated level sensor value and comparing the estimated value with [the] actual value.” Accordingly, Applicant submits the Examiner has not made a *prima facie* case of obviousness to support the current rejection, since he has not pointed out which portion of Elenich discloses the above-noted features of the claimed invention.

Further, Applicant submits Elenich fails to teach or suggest comparing the current input signal level with the previous input signal level. The particular portions of Elenich cited by the Examiner simply disclose a pair of counters used in a faulty fuel tank level sensor.⁵ One counter

⁵ See Elenich, FIG. 2, elements 212 and 220.

keeps a count of a condition corresponding to a “stuck” fuel level sensor.⁶ The other counter keeps a count of a condition corresponding to an “implausible” signal detection.⁷ Neither counter contemplates comparing the current input signal level with the previous input signal level. Indeed, none of the cited portions mentioned by the Examiner disclose anything whatsoever related to comparing a current input signal level with a previous input signal level.

Consequently, Applicant submits Elenich fails to teach the above-noted claimed features. Moreover, Applicant submits that none of the cited references, alone or in combination, teaches or suggests these features of the claimed invention.

Additionally, the Examiner states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naruki in view of Elenich “for [the] purpose of monitoring/calculating the estimated level sensor value and comparing the estimated value with [the] actual value.” Again, Applicant disagrees with the Examiner’s position.

On the contrary, even assuming, *arguendo*, that the prior art of record discloses all of the required features of the claimed invention, Applicant submits one of ordinary skill in the art at the time the invention was made would not have been motivated to modify Naruki in view of Elenich for the reasons stated by the Examiner, since Naruki is completely unrelated to the purpose of monitoring/calculating estimated levels of sensor values and comparing estimated values with actual values of sensor values.

⁶ See Elenich, FIG. 2 and col. 3, lines 58-61.

⁷ See Elenich, FIG. 2 and col. 4, lines 24-27.

Furthermore, such a modification as suggested by the Examiner would impermissibly change the principle of operation of Naruki.³ For example, as noted above, Naruki discloses a specific method for processing an audio signal, which reproduces a desired sound quality of an audio signal, reduces data volume and processes the signal with a test tone so that the audio signal is reproduced at an output level adjusted according to the test tone.² In order to perform these explicit goals, Naruki discloses very a specific method of processing a signal.

As a result, arbitrarily adding the claimed features, i.e., a change counter value, which is a number of input signals having different levels detected by comparing the current input signal level with the previous input signal level, and a no-change counter value, which is a number of input signals having a same level detected by comparing the current input signal level with the previous input signal level, would completely destroy the precise signal processing required under Naruki. Indeed, such a modification of Naruki would serve no purpose whatsoever. Therefore, Applicant submits one of ordinary skill in the art at the time the invention was made would not have been motivated to modify Naruki in view of Elenich as the Examiner suggests.

The Examiner goes on to state that the combined teaching of Naruki and Elenich teaches the claimed determining unit and control unit. However, Applicant submits neither reference teaches or suggests all of the claimed features, of either the determining unit or the control unit, for reasons analogous to those stated above. For example, since none of the cited references teaches or suggests the claimed maximum no-change value and the no-change counter value, as noted above, Applicant submits, none the cited references teaches or suggests a determination

³ See MPEP § 2143.02 (VI).

² See Naruki, col. 2, line 39 to col. 3, line 10.

unit which determines whether corresponding values stored in a memory are substantially identical, based, in part, on the claimed change counter value. Applicant submits the same would be true regarding the claimed control unit.

In addition, Applicant notes the Examiner admits that Naruki and Elenich fail to teach or suggest the storing a predetermined level as the current input signal level based on the determination by said determining unit as to whether said corresponding values are substantially identical. Nevertheless, the Examiner contends that Lebizay teaches this unique feature, and states that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Naruki and Elenich in view of Lebizay, for the purpose of “transmitting non-repetitive packet to a network format as taught by Lebizay.” Again, Applicant disagrees with the Examiner’s stated motivation.

Instead, Applicant submits the Examiner’s stated motivation to modify the references is improper for reasons analogous to those stated above regarding the Examiner’s rationale for modifying Naruki in view of Elenich.

In view of the above, Applicant submits claim 1 is patentable over the prior art of record for at least these reasons. Similarly, Applicant submits independent claim 10 is patentable over the prior art of record for reasons analogous to those stated above regarding independent claim 1. Further, Applicant submits dependent claims 2-7 and 11-14 are also patentable over the prior art of record, at least by virtue of their respective dependency on claims 1 and 10.

Claims 8, 15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruki and Elenich and Lebizay and further in view of Lechevalier (US Publication 2003/0137341 A1).

Applicant submits Lechevalier fails to cure the deficiency of the other references noted above regarding independent claim 1. Thus, Applicant submits claims 8 and 15 are patentable

over the cited references, at least by virtue of their respective dependency on independent claims 1 and 10.

Claims 9, 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Naruki and Elenich and Lebizay and further in view of Woo (USP 5,347,499).

Applicant submits Woo fails to cure the deficiency of the other references noted above regarding independent claim 1. Thus, Applicant submits claims 9 and 16 are patentable over the cited references, at least by virtue of their respective dependency on independent claims 1 and 10.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Mark C. Davis", with a large, stylized loop at the end.

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